LAKE OKEECHOBEE PLANKTON ASSESSMENT PROJECT

Mandate:

Comprehensive Everglades Restoration Plan (CERP)
Lake Okeechobee Watershed Protection Program (LOWPP)

Background:

This project deals with the Lake's plankton -- a group of microscopic plants and animals that are suspended in the water column. Plankton comprises the base of a food web that supports fish; plankton also includes the blue-green algae (cyanobacteria) that can form noxious blooms that impact water quality. Quantitative data on plankton therefore are a key part of a lake restoration evaluation. Plankton-based performance measures are included in both CERP and the LOWPP monitoring and assessment plans.

Project Overview:

Long-term monitoring began in 1994; it consists of collecting plankton samples at four open-water sites on a monthly basis to determine both biomass and taxonomic composition. Water samples also are analyzed for limiting nutrient status, which determines the extent to which noxious blue-greens are favored in the community. Productivity of phytoplankton (algae) and bacteria plankton is determined, as indicators of energy available at the base of the food web.

Application of Results:

Results of the monitoring are used to determine yearly scores for ecological performance measures (e.g., blue-green algae, frequency of nitrogen vs. phosphorus limitation) developed for the CERP and the LOWPP.